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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,926	10/24/2003	Kumar T. Kembaiyan	03-GD93	9038

10395 7590 07/21/2005

SMITH INTERNATIONAL INC.  
16740 HARDY  
HOUSTON, TX 77032

EXAMINER
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SMITH, MATTHEW J

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/692,926	Applicant(s) KEMBAIYAN, KUMAR T.	
	Examiner Matthew J. Smith	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short, Jr. (4453605) in view of Naidich et al. (4009027).

Short, Jr. discloses a method of making a downhole cutting tool comprising inserting a base portion of a cutting element 16 into a body cavity or pocket 14 in a blade 22, locating a braze alloy 28 in the cavity after positioning of the cutter 16, heating the alloy to bond, placing the alloy in a space between the cutter and pocket (fig.5), fixed cutter drill bit 10, the cutter having a ultrahard or tungsten carbide substrate (col. 5, line 30), polycrystalline diamond (col. 2, lines 24-25), but not the claimed materials by percent weight.

Naidich et al. teach using a brazing alloy including thallium in the 0.001 to 10 percent by weight (col. 4, lines 13-20; col. 4, lines 1-2).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the brazing alloy taught by Naidich et al. in the Short, Jr. method of making a cutting tool in order to increase strength (col. 3, lines 26-45).

Also note in Naidich et al., the experimentation of using thallium, indium, or gallium in the alloy (small print in col. 5, top; col. 9, middle; col. 12, bottom; col. 15, two-thirds form top; col. 17, middle; col. 19, top; col. 21, top; respectively).

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Claims 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short, Jr. (4453605) in view of Naidich et al. (4009027).

Short, Jr. discloses a downhole cutting tool comprising a base portion of a cutting element 16 into a body cavity or pocket 14 in a blades 22, a braze alloy 28 in the cavity after positioning of the cutter 16, fixed cutter drill bit 10, the cutter having a ultrahard or tungsten carbide substrate (col. 5, line 30), polycrystalline diamond (col. 2, lines 24-25), but not the claimed materials by percent weight.

Niadich et al. teach a brazing alloy including thallium in the 0.001 to 10 percent by weight (col. 4, lines 13-20; col. 4, lines 1-2).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the brazing alloy taught by Niadich et al. as the Short, Jr. alloy in order to increase strength (col. 3, lines 26-45).

Also note in Naidich et al., the experimentation of using thallium, indium, or gallium in the alloy (small print in col. 5, top; col. 9, middle; col. 12, bottom; col. 15, two-thirds form top; col. 17, middle; col. 19, top; col. 21, top; respectively).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 571-272-7034. The examiner can normally be reached on T-F, 9-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 or 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

MJS *MJS*  
5 July 2005